

## Guide to Key Citations Referenced in draft Antidegradation Rule, 327 IAC 2-1.3

There are a number of references in the draft Antidegradation Rule that cite Indiana's Water Quality Standards at 327 IAC 2. The standards include:

**Rule 1. Water Quality Standards Applicable to All State Waters Except Waters of the State Within the Great Lakes System;** and

**Rule 1.5. Water Quality Standards Applicable to All State Waters Within the Great Lakes System**

Some of the specific Water Quality Standard (WQS) citations referenced are listed below.

### WQS reference A

#### 327 IAC 2-1.5-4 Antidegradation standard

Authority: IC 13-14-8; IC 13-14-9; IC 13-18-3

Affected: IC 13-18-4; IC 13-30-2-1

Sec. 4. (a) For all surface waters of the state within the Great Lakes system, existing instream water uses and the level of water quality necessary to protect existing uses shall be maintained and protected. Where designated uses of the waterbody are impaired, there shall be no lowering of the water quality with respect to the pollutant or pollutants that are causing the impairment.

(b) Any surface water of the state within the Great Lakes system whose existing quality for any parameter exceeds the criteria established within this rule shall be considered high quality for that parameter consistent with the definition of high quality water found in this rule; and that quality shall be maintained and protected unless the commissioner finds, after full satisfaction of intergovernmental coordination and public participation provisions under 327 IAC 5-2-11.3, that allowing lower water quality is necessary and accommodates *[sic.]* important economic or social development in the area in which the waters are located. In allowing such degradation, the commissioner shall assure water quality adequate to protect existing uses fully. Further, the commissioner shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control. The commissioner shall utilize the antidegradation implementation procedures under 327 IAC 5-2-11.3 in determining if a significant lowering of water quality will be allowed.

(c) From the effective date of this section until the expiration date of 327 IAC 5-2-11.7, all high quality waters designated under section 19(b) of this rule as an outstanding state resource water shall be maintained and protected in their present high quality without degradation. Upon expiration of 327 IAC 5-2-11.7, all high quality waters designated under section 19(b) of this rule as an outstanding state resource water shall be maintained in their present high quality without degradation.

(d) High quality waters designated as an outstanding national resource water (such as waters of national and state parks and wildlife refuges and waters of exceptional recreational or ecological significance) shall be maintained and protected in their present high quality without degradation.

(e) In those cases where the potential lowering of water quality is associated with a thermal discharge, the decision to allow such degradation shall be consistent with Section 316 of the Clean Water Act and 327 IAC 5-7.

## WQS reference B

### 327 IAC 2-1.5-6 Bioaccumulative chemicals of concern

Authority: IC 13-14-8; IC 13-14-9; IC 13-18-3

Affected: IC 13-18-4; IC 13-30-2-1

Sec. 6. (a) A bioaccumulative chemical of concern (BCC) is any chemical that meets the following requirements:

(1) Has the potential to cause adverse effects.

(2) Has a half-life of at least eight (8) weeks in the water column, sediment, and biota.

(3) Upon entering the surface waters, by itself or as its toxic transformation product, accumulates in aquatic organisms by a human health bioaccumulation factor (BAF) greater than one thousand (1,000) after considering metabolism and other physicochemical properties that might enhance or inhibit bioaccumulation, in accordance with the procedure in section 13 of this rule. The minimum BAF information needed to define a chemical as a BCC is either of the following:

(A) For an organic chemical, either a field-measured BAF or a BAF derived using the BSAF methodology.

(B) For an inorganic chemical, including an organometal, either a field-measured BAF or a laboratory-measured BCF.

(b) Pollutants that are BCCs include, but are not limited to, the following:

*Table 6-1: Bioaccumulative Chemicals of Concern*

<u>CAS Number</u>	<u>Substance</u>
57749	Chlordane
72548	4,4'-DDD; p,p'-DDD; 4,4'-TDE; p,p'-TDE
72559	4,4'-DDE; p,p'-DDE
50293	4,4'-DDT; p,p'-DDT
60571	Dieldrin
118741	Hexachlorobenzene
87683	Hexachlorobutadiene; hexachloro-1,3-butadiene
608731	Hexachlorocyclohexanes; BHCs
319846	alpha-Hexachlorocyclohexane; alpha-BHC
319857	beta-Hexachlorocyclohexane; beta-BHC
319868	delta-Hexachlorocyclohexane; delta-BHC
58899	Lindane; gamma-Hexachlorocyclohexane; gamma-BHC
7439976	Mercury
2385855	Mirex
29082744	Octachlorostyrene
1336363	PCBs; polychlorinated biphenyls
608935	Pentachlorobenzene
39801144	Photomirex
1746016	2,3,7,8-TCDD; dioxin
634662	1,2,3,4-Tetrachlorobenzene
95943	1,2,4,5-Tetrachlorobenzene
8001352	Toxaphene

(c) The substances established in this subsection shall be treated as BCCs under this rule and under 327 IAC 5-2-11.3 through 327 IAC 5-2-11.6. If additional data becomes available (such as a field-measured BAF) for a substance established in this subsection that conclusively demonstrates that the substance should not be treated as a BCC, the commissioner may determine that it is not necessary to treat the substance as a BCC. Substances treated as BCCs include the following:

*Table 6-2: Substances Treated as Bioaccumulative Chemicals of Concern*

<u>CAS Number</u>	<u>Substance</u>
309002	Aldrin
72208	Endrin

**WQS reference C****327 IAC 2-1-2 Maintenance of surface water quality standards**

Authority: IC 13-14-8; IC 13-14-9; IC 13-18-3

Affected: IC 13-18-1; IC 13-18-4; IC 13-30-2-1

Sec. 2. The following policies of nondegradation are applicable to all surface waters of the state:

(1) For all waters of the state, existing beneficial uses shall be maintained and protected. No degradation of water quality shall be permitted which would interfere with or become injurious to existing and potential uses.

(2) All waters whose existing quality exceeds the standards established herein as of February 17, 1977, shall be maintained in their present high quality unless and until it is affirmatively demonstrated to the commissioner that limited degradation of such waters is justifiable on the basis of necessary economic or social factors and will not interfere with or become injurious to any beneficial uses made of, or presently possible, in such waters. In making a final determination under this subdivision, the commissioner shall give appropriate consideration to public participation and intergovernmental coordination.

(3) The following waters of high quality, as defined in subdivision (2), are designated by the board to be an **outstanding state resource** and shall be maintained in their present high quality without degradation:

(A) The Blue River in Washington, Crawford, and Harrison Counties, from river mile 57.0 to river mile 11.5.

(B) The North Fork of Wildcat Creek in Carroll and Tippecanoe Counties, from river mile 43.11 to river mile 4.82.

(C) The South Fork of Wildcat Creek in Tippecanoe County, from river mile 10.21 to river mile 0.00.

(4) Any determination made by the commissioner in accordance with Section 316 of the Clean Water Act concerning alternative thermal effluent limitations will be considered to be consistent with the policies enunciated in this section.

**WQS reference D****327 IAC 2-1.5-19 Limited use waters and outstanding state resource waters**

Authority: IC 13-14-8; IC 13-14-9; IC 13-18-3

Affected: IC 13-18-4

Sec. 19. (b) The following waters within the Great Lakes system are designated as an **outstanding state resource** water:

(1) Cedar Creek in Allen and DeKalb counties, from river mile 13.7 to its confluence with the St. Joseph River.

(2) The Indiana portion of the open waters of Lake Michigan.

(3) All waters incorporated in the Indiana Dunes National Lakeshore.

**WQS reference E****327 IAC 2-1-11 Limited and exceptional use; designated waters**

Authority: IC 13-14-8; IC 13-14-9; IC 13-18-3

Affected: IC 13-18-4

Sec. 11. (b) The following waters of the state are designated for **exceptional use** under section 3(a)(6) of this rule:

- (1) Big Pine Creek in Warren County downstream of the State Road 55 bridge near the town of Pine Village to its confluence with the Wabash River.
- (2) Mud Pine Creek in Warren County from the bridge on the County Road between Brisco and Rainsville to its confluence with Big Pine Creek.
- (3) Fall Creek in Warren County from the old C.R. 119 bridge in the NW quarter of Section 21, Township 22N, Range 8W downstream to its confluence with Big Pine Creek.
- (4) Indian Creek in Montgomery County from the County Road 650 West bridge downstream to its confluence with Sugar Creek.
- (5) Clifty Creek in Montgomery County within the boundaries of Pine Hills Nature Preserve.
- (6) Bear Creek in Fountain County from the bridge on County Road 450 North to its confluence with the Wabash River.
- (7) Rattlesnake Creek in Fountain County from the bridge on County Road 450 North to its confluence with Bear Creek.
- (8) The small tributary to Bear Creek in Fountain County within the Portland Arch Nature Preserve which enters Bear Creek at the sharpest bend and has formed the small natural bridge called Portland Arch.
- (9) Blue River from the confluence of the West and Middle Forks of the Blue River in Washington County downstream to its confluence with the Ohio River.
- (10) The South Fork of Blue River in Washington County from the Horner's Chapel Road bridge downstream to its confluence with Blue River.
- (11) Lost River and all surface and underground tributaries upstream from the Orangeville Rise (T2N, R1W, Section 6) and the Rise of Lost River (T2N, R1W, Section 7) and the mainstem of the Lost River from the Orangeville Rise downstream to its confluence with the East Fork of White River

#### **WQS reference F**

##### **327 IAC 2-1-3 Surface water use designations; multiple uses**

Authority: IC 13-14-8; IC 13-14-9; IC 13-18-3

Affected: IC 13-18-4

Sec. 3. (a) The following water uses are designated by the water pollution control board:

- (1) Except as provided in subsection (c), surface waters of the state are designated for full body contact recreation as provided in section 6(d) of this rule.
- (2) All waters, except as described in subdivision (5), will be capable of supporting:
  - (A) a well-balanced, warm water aquatic community; and
  - (B) where natural temperatures will permit, put-and-take trout fishing.All waters capable of supporting the natural reproduction of trout as of February 17, 1977, shall be so maintained.
- (3) All waters that are used for public or industrial water supply must meet the standards for those uses at the points where the water is withdrawn. This use designation and its corresponding water quality standards are not to be construed as imposing a user restriction on those exercising or desiring to exercise the use.
- (4) All waters that are used for agricultural purposes must, as a minimum, meet the standards established in section 6(a) of this rule.
- (5) All waters in which naturally poor physical characteristics (including lack of sufficient flow), naturally poor chemical quality, or irreversible man-induced conditions, which came into existence

before January 1, 1983, and having been established by use attainability analysis, public comment period, and hearing:

(A) may qualify to be classified for limited use; and  
(B) must be evaluated for restoration and upgrading at each triennial review of this rule.

Specific waters of the state designated for limited use are listed in section 11(a) of this rule.

(6) All waters that:

(A) provide unusual aquatic habitat;  
(B) are an integral feature of an area of exceptional natural beauty or character; or

(C) support unique assemblages of aquatic organisms:

may be classified for exceptional use. Specific waters of the state designated for exceptional use are listed in section 11(b) of this rule.

(b) Where multiple uses have been designated for a body of water, the most protective of all simultaneously applicable standards will apply.

(c) A CSO wet weather limited use designation is established as a subcategory of the recreational use designation established under subsection (a). This subcategory shall be applied in accordance with section 3.1 of this rule.

A number of other references cite Indiana's the Industrial Wastewater Pretreatment Programs and NPDES rule at 327 IAC 5. Some of the specific NPDES citations referenced are listed below.

#### **NPDES Reference G**

##### **327 IAC 5-2-4 Exclusions**

Authority: IC 13-1-3-4; IC 13-1-3-7; IC 13-7-7; IC 13-7-10-1

Affected: IC 13-1-3; IC 13-7; IC 13-8

Sec. 4. The following discharges do not require an NPDES permit:

(1) Any discharge of sewage from vessels, effluent from properly functioning marine engines, laundry, shower, and galley sink wastes, or any other discharge incidental to the normal operation of a vessel.

This exclusion does not apply to rubbish, trash, garbage, or other such materials discharged overboard; nor to other discharges when the vessel is operating in a capacity other than as a means of transportation such as when a vessel is being used as an energy or mining facility, a storage facility, or a seafood processing facility, or is secured to the bed of the waters of the state for the purpose of mineral or oil exploration

or development.

(2) Discharges of dredged or fill material into waters of the state and regulated under section 404 of the CWA, except where the commissioner determines, on a case-by-case basis that such a discharge threatens to violate state water quality standards concerning toxic pollutants.

(3) The introduction of sewage, industrial wastes, or other pollutants into publicly owned treatment works by indirect dischargers. However, all applicable pretreatment standards promulgated under section 307(b) and 307(c) of the CWA must also be complied with, and may be included in the permit to the publicly owned treatment works. This exclusion does not apply to discharges through pipes, sewers, or other conveyances owned by a public entity not leading to treatment works.

(4) Any introduction of pollutants from nonpoint source agricultural and silvicultural activities, including runoff from orchards, cultivated crops, pastures, range lands, and forest lands, except that this exclusion shall not apply to discharges from concentrated animal

feeding operations as defined in 327 IAC 5-4-3 or from silvicultural point sources as defined in 327 IAC 5-4-7.

(5) Any discharge in compliance with the instructions of an on-scene coordinator pursuant to 40 CFR 300 or 33 CFR 153.10(e) or of a state employee acting in a similar capacity.

(6) Discharges into a privately owned treatment works, except as the commissioner may otherwise require under section 10(e) of this rule.

(7) Any discharge by underground injection of salt or sulfur-bearing water or waste liquids associated with the recovery of oil and natural gas, if the discharge is pursuant to a valid permit issued by the natural resources commission under IC 13-8.

(8) Any discharge consisting entirely of return flows from irrigated agriculture.

(9) Deep injection wells, except in accordance with 327 IAC 5-4-2.

#### **NPDES Reference H**

##### **327 IAC 5-2-11.4(a) (8) and (9) TMDLs, WLAs calculated in the absence of a TMDL, and preliminary WLAs.**

(8) Background loadings may be accounted for in a TMDL through an allocation to a single background category or through individual allocations to the various background sources as follows:

(A) As used in this subsection, "background" represents all loadings resulting from the following:

(i) Flow from upstream waters into the specified watershed, waterbody, or waterbody segment for which a TMDL, WLA in the absence of a TMDL, or preliminary WLA for the purpose of determining the need for a WQBEL is being developed.

(ii) Atmospheric deposition or sediment release or resuspension.

(iii) Chemical reactions occurring within the watershed, waterbody, or waterbody segment.

(B) When determining what available data are acceptable for use in calculating background, the commissioner shall use best professional judgment, including consideration of the sampling location and the reliability of the data through comparison to reported analytical detection levels. Pollutant degradation and transport information may be considered when utilizing pollutant loading data. Where limited or no acceptable data exist, the commissioner may require the permittee to supply the necessary data. Best professional judgment shall be used to select the one (1) data set that most accurately reflects or estimates background concentrations when data in more than one (1) of the following data sets or categories exist:

(i) Acceptable available water column data.

(ii) Water column concentrations estimated through use of acceptable available caged or resident fish tissue data.

(iii) Water column concentrations estimated through use of acceptable available or projected pollutant loading data.

(C) The representative background concentration for a substance in the specified watershed, waterbody, or waterbody segment shall be established as follows:

(i) If all the values in the data set selected in clause (B) are at or above the LOD, then the background concentration is the geometric mean of that data set.

(ii) If the data set consists of values above and below the LOD, the following procedure shall be used to determine the representative background concentration:

(AA) Each value in the data set with a value less than the LOD (nondetect) shall be assigned the value (V). The geometric mean of this adjusted data set is the representative background concentration. The value (V) is determined as follows:

$$V = (\text{LOD}) \times (1 - \text{Number of nondetects} / \text{Total number of values})$$

(BB) If information is available that indicates an alternate methodology for evaluating the data set would result in a background concentration more representative of actual conditions, this alternative methodology may be used in place of the methodology contained in subitem (AA) upon approval of the commissioner.

(iii) When all of the acceptable available data in a data set or category, such as water column, caged or resident fish tissue, or pollutant loading data, are below the LOD for a substance, and the most sensitive approved analytical method available for that substance was used, then all the data for that pollutant in that data set shall be assumed to be zero (0).

(iv) Notwithstanding items (i) through (iii), the representative background concentration of whole effluent toxicity (WET) shall be assumed to be zero (0) unless data are available that indicates that the discharge of the WET and any background WET are additive.

(9) The effluent flow used to develop TMDLs, WLAs calculated in the absence of a TMDL, and preliminary WLAs shall be determined as follows:

(A) For municipal, semipublic, and other sanitary or domestic wastewater discharges, the average design flow of the treatment facility shall be used.

(B) For industrial dischargers, the highest monthly average flow from the previous two (2) years of monitoring shall be used.

(C) Notwithstanding clauses (A) and (B), an alternate effluent flow value may be used, upon approval by the commissioner, if the discharger provides flow data that supports the alternate value (such as when a TMDL or WLA is calculated for wet weather conditions as provided in section 11.6(g)(4) of this rule). This flow data shall be included with the application for a new permit, a renewal of an existing permit, or with a request for modification of an existing permit, or when requested by the commissioner.

(D) TMDLs, WLAs calculated in the absence of a TMDL, and preliminary WLAs shall indicate the point source effluent flows used in the analyses.

#### **NPDES Reference I**

**327 IAC 5-2-8(11)** The following are requirements for bypass:

(A) The following definitions:

(i) "Bypass" means the intentional diversion of a waste stream from any portion of a treatment facility.

(ii) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

(B) The permittee may allow any bypass to occur that does not exceed any effluent limitations contained in the NPDES permit, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to clauses (C) and (D).

(C) The permittee must provide the commissioner with the following notice:

- (i) If the permittee knows or should have known in advance of the need for a bypass (anticipated bypass), it shall submit prior written notice. If possible, such notice shall be provided at least ten (10) days before the date of the bypass for approval by the commissioner.
- (ii) The permittee shall submit notice of an unanticipated bypass as required by subdivision (10)(C).

(D) The following provisions are applicable to bypasses:

- (i) Bypass is prohibited, and the commissioner may take enforcement action against a permittee for bypass unless the following occur:
  - (AA) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage.
  - (BB) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment down time. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment down time or preventive maintenance.
- (CC) The permittee submitted notices as required under clause (C).
- (ii) The commissioner may approve an anticipated bypass, after considering its adverse effects if the commissioner determines that the anticipated bypass will meet the three (3) conditions listed in item (i). The commissioner may impose any conditions determined to be necessary to minimize any adverse effects.

#### **NPDES Reference J**

#### **327 IAC 5-2-11.5 Great Lakes system dischargers determination of reasonable potential to exceed water quality**

##### **327 IAC 5-2-11.5(b)(4)(B)(i)**

(i) The commissioner finds that the intake pollutant would have reached the vicinity of the outfall point in the receiving water within a reasonable period had it not been removed by the permittee. This finding may be deemed established if:

- (AA) the representative background concentration of the pollutant in the receiving water, as determined under section 11.4(a)(8) of this rule, (excluding any amount of the pollutant in the facility's discharge) is similar to or greater than that in the intake water;
- (BB) there is a direct hydrological connection between the intake and discharge points (the water at the point of intake naturally flows toward the water at the point of discharge); and
- (CC) any difference in a water quality characteristic (such as temperature, pH, and hardness) between the intake and receiving waters does not result in an adverse impact on the receiving water.